4. Modern Technology Must be Deployed on the Entire Southern Border

The process of protecting and monitoring the border is still a labor-intensive job, and DHS has failed to deploy adequate technology to help screen the millions of people, thousands of vehicles, and tons of cargo that cross the Southern Border. Little planning and inadequate funding have gone into technological advancements to modernize the border. Much of the technology found on the Southern Border is over 25 years old. Although some new technologies have been introduced in certain areas of the border, especially in video surveillance and communications, these limited deployments cannot meet the challenges at hand.

Border Monitoring Technology Between The Ports-Of-Entry Is Inadequate

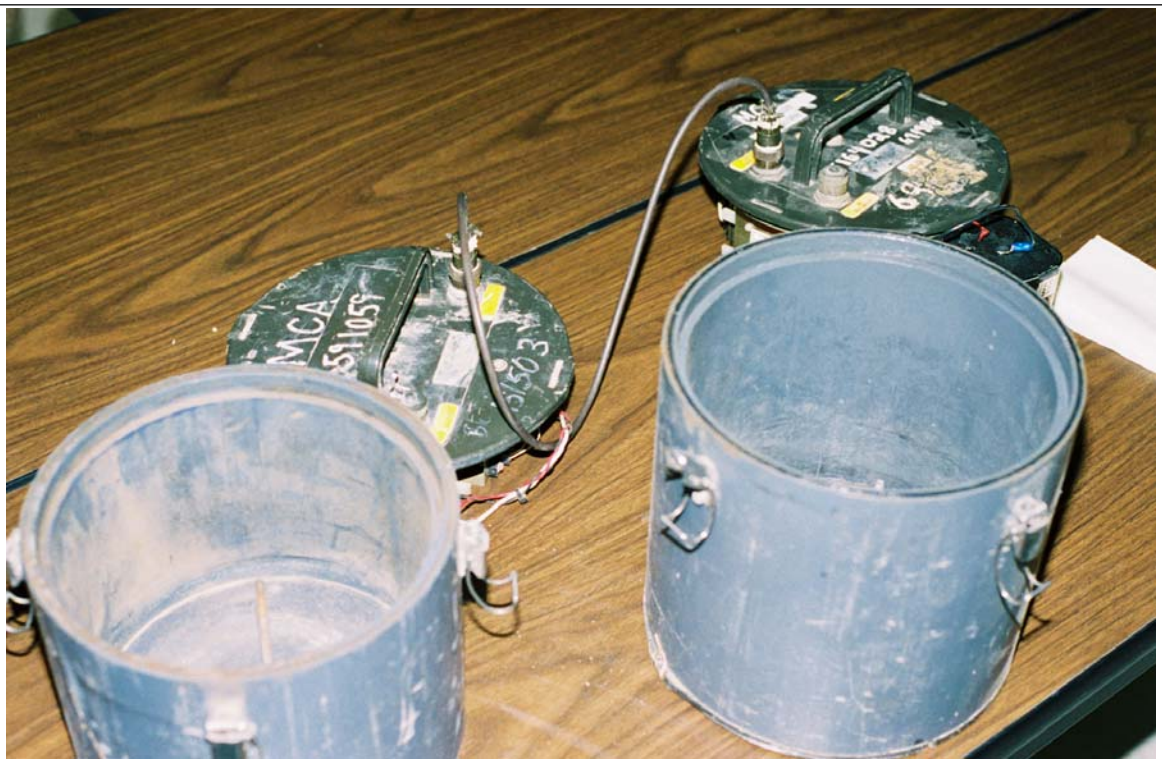
Technology has long been recognized as a force-multiplier.[105] It provides an opportunity to monitor areas where it is otherwise unsafe or impractical to station personnel around the clock – for example, in the mountains or remote deserts of the Southern Border. Technology also allows agents to spend more time responding to real threats instead of constantly chasing "false alarms." Monitoring technologies currently exist to identify threats coming across our borders. Yet, there is currently no strategy for deployment of a comprehensive monitoring system to cover all 1,933 miles of the U.S.-Mexico border 24-hours a day, seven days a week. Instead, technology has been used haphazardly and mainly in support of several agent-intensive operations along the Southern Border such as "Hold the Line" in El Paso, Texas and "Operation Gatekeeper" in San Diego, California. These operations made only limited use of technology – and the technology that was deployed was dependent upon individual agents (night vision goggles, forward-looking infra-red radar "FLIR" camera systems that require an agent to monitor on-site). The lack of a comprehensive monitoring system continues to leave large stretches of the Southern Border unmonitored, thus presenting opportunities for the entry of terrorists and illicit cargo.

Cameras and Sensors

The Border Patrol currently uses about 10,600 seismic, magnetic, and thermal sensors along the Southern Border – most of these utilize quarter-century-old technology, but it is technology that works.[106] The sensors, approximately two feet square, are buried in the ground to detect movement (seismic) and heat (thermal) sources within a 50-foot radius, and metal (magnetic) within 250 feet. This means the sensors can detect foot traffic, vehicles, and, unfortunately, even animals or falling tree limbs. They cost between $1,000 and $1,200 per sensor, and older sensors have to be dug up on a monthly basis to replace their batteries.[107]

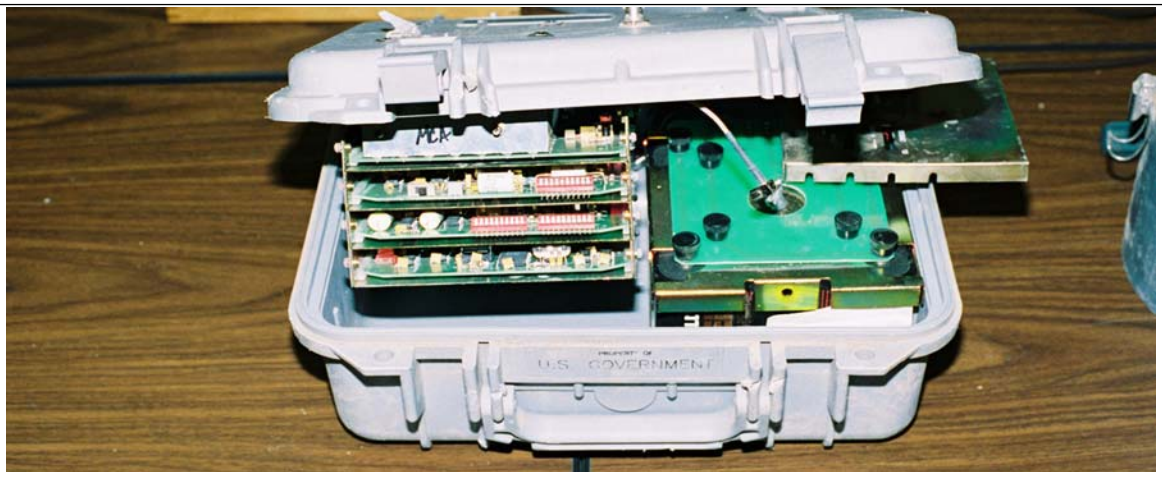
The sensors relay information via radio signal to a central monitoring location, and can be set to varying degrees of sensitivity – for example, desert-based sensors might be set at a higher level of sensitivity, since there is less "foot traffic," than city-based sensors. When a sensor registers an event, it sends out a signal and an agent must be dispatched to check on it. This is very labor-intensive, with sectors such as El Paso getting over 30,000 hits per month – all requiring agents to be dispatched.[108]

[105] Testimony of David Aguilar, Tucson Sector Border Patrol Chief. U.S. House, Infrastructure and Border Security Subcommittee of the House Select Committee on Homeland Security, *Protecting the Homeland: Building a Layered and Coordinated Approach to Border Security*, June 15, 2004.
[106] Number provided to the staff by Border Patrol Office of Legislative Affairs, August, 2004.
[107] Staff interviews at El Paso Border Patrol station, March 29, 2004.
[108] *Ibid.*



Quarter century-old ground sensors used by Border Patrol.

Because the Border Patrol does not have enough sensors to cover the entire Southern Border, sensors are constantly required to be moved to respond to changes in smuggling patterns. This requires them to be manually dug up, moved, and then re-buried in a new location – a very time-consuming and labor-intensive process performed by Border Patrol agents since the agency lacks funds for support staff or contractors to perform this task.



New models of ground sensors used by Border Patrol.

For almost 30 years, the Border Patrol used only these sensors to detect movement along the border.[109] They continue to constitute the bulk of the Border Patrol's sensor inventory. However, over the past seven years, the Border Patrol has begun deploying comprehensive detection systems called Integrated Surveillance Intelligence Systems (ISIS), or Remote Video Surveillance systems. Each system includes a central command center, ground sensors, and four cameras (two infrared and two daytime/color) mounted on a tall pole to provide a three to five-mile, 360-degree viewing range. The system incorporates most of the ground sensors already in use.

These comprehensive systems allow agents at computer consoles to identify why a sensor has been tripped. The cameras save field agents the trouble of checking on false alarms which are commonly caused by wandering domesticated or wild animals.

ISIS Control Center at Laredo, Texas.

Even where ISIS exists, staffing shortages mean that one agent is often responsible for several technology-related duties. For example, when staff visited El Paso, Texas to inspect an ISIS system, only one support employee was available to monitor 26 cameras and dispatch agents to respond to sensor activations with as many as 200 to 300 sensors alerting in a two-hour period. As described in a previous section, the employee must log all this activity, run computer checks on detainees, and serve as a radio dispatcher.

[109] Tillett, L. Scott, "Cameras, GPS integrated to fight illegal immigration," *Federal Computer Week*, October 20, 1997. Available at http://www.fcw.com.

Unfortunately, these systems have been deployed on an ad hoc basis, and are not part of a larger technology deployment plan to cover the entire border. The Border Patrol currently has 200 camera surveillance systems covering a fraction of the 1,933 mile-long Southern Border.[110] Border Patrol officials recently stated that it would cost $2 billion to fully deploy video surveillance systems along the Northern and Southern Borders, and yet DHS has only requested $64 million in its Fiscal Year 2005 budget for border enforcement technology, such as cameras and sensors.[111]

The staff viewed video surveillance system operations in three of the Border Patrol's busiest sectors. In Laredo, the Border Patrol Chief praised the utility of such systems and indicated he would like to see them expanded. The Laredo surveillance systems cover only 32 of the 171 total miles of border in the Laredo sector, but are responsible for 25 to 50 apprehensions per day. Chief Montoya indicated that each camera costs approximately $650,000 to buy and operate, which is still less than it would be to position two agents at mile-intervals to provide around-the-clock border monitoring.[112] In El Paso, the ISIS system covers 21 miles of the border. It incorporates 850 sensors and 29 camera systems covering 42 of the 289 total border miles in the El Paso sector. The costs per site were estimated to be approximately $750,000.[113] In the McAllen sector, the ISIS system covers approximately 112 miles of the 284 miles of river border. It utilizes 36 separate camera sites and 300 ground sensors, and is responsible for 60% of all apprehensions in the sector. With an additional 50-60 cameras, the system could completely cover the river border in that sector.[114]

Tethered Aerostat Radar System

As part of the layered approach to border security, DHS uses data from the Tethered Aerostat Radar System (TARS) to identify low-flying (100 – 500 feet) air traffic attempting to illegally cross our Southern Border. The TARS provides complete coverage of the 1,933-mile U.S.-Mexico border through six high-altitude balloons that survey 165 to 200 nautical miles in any direction. This capability allows law enforcement officers to identify potential targets in Mexico headed toward the United States or even planes that "fade" from radar just short of the U.S. border and reappear just north of the border.

The TARS system is owned and operated by the Department of Defense as part of its counter narcotics mission and originated in the 1980s as an illegal drug trafficking monitoring system for the Southern Border, Gulf Coast, Florida Keys, and Puerto Rico. The Defense Department gradually reduced the overall number of operational blimps to eight and now spends about $30 million annually to maintain the system.[115] The radar information from the TARS is routed to the Air and Marine Operations Center in Riverside, California, which is part

[110] Testimony of Stewart Verdery, Assistant Secretary for Border and Transportation Security Policy and Planning (DHS), U.S. Senate, Committee on Foreign Relations, March 23, 2004.
[111] Testimony of Stewart Verdery, Assistant Secretary for Border and Transportation Security Policy and Planning (DHS), U.S. Senate, Committee on Foreign Relations, March 23, 2004; and Sarkar, Dibya, "Border guards eye surveillance," *Federal Computer Week*, August 5, 2004. Available at http://www.fcw.com.
[112] Staff interviews at Laredo ISIS Command Center, March 29, 2004.
[113] Staff interviews at El Paso Border Patrol Station, March 29, 2004.
[114] Staff interviews at McAllen Border Patrol Station, June 9, 2004..
[115] Office of the Secretary of Defense, Counternarcotics, briefing for staff, May 13, 2004.

of ICE. There, data from several sources are combined to provide a comprehensive picture of air traffic in and around the continental United States.

The TARS is currently the only fixed system that can provide information on low-flying aircraft and has produced impressive seizure statistics: of the total number of suspect planes identified in fiscal year 2002, 83% were identified by TARS. In addition, TARS was responsible for seizures totaling 21,600 kilograms of marijuana, 565 kilograms of cocaine, and 2.3 kilograms of heroin in fiscal year 2002.[116]

Despite its unique capabilities, however, the TARS has critical operational limitations – most notably, the balloons cannot be flown in bad weather. This makes their enforcement capabilities erratic and reduces their operational availability from 100% to 60-70%.[117] In addition, the blimps are extremely expensive to buy and maintain: it costs $1.8 million to purchase the balloons and $3 million a year for maintenance (helium, personnel to monitor and deploy) over the five-year lifespan of the balloon.[118] This means that AMO must continue to use P-3s when a TARS balloon is not available until a new and less-expensive means of identifying low-flying planes is identified.

Unmanned Aerial Vehicles (UAVs)

A less-costly alternative to TARS may be unmanned aerial vehicles, or UAVs, which range in price from $350,000 to $4.5 million depending upon their capabilities.[119] There are two categories of UAVs: drones and remotely piloted vehicles (RPVs). Both drones and RPVs are pilotless, but drones are programmed for autonomous flight; RPVs require a ground control operator to fly remotely. Both are flown at high altitudes and carry a variety of monitoring equipment.

A report issued by DHS in March, 2004 concludes "UAVs appear to be particularly applicable to monitoring the Southern land borders."[120] In reaching this conclusion, the report cites several of the unique efficiencies of UAVs including their ability to:

- cover "remote border areas with multiple possible crossing points and…extending across the border;
- operate day or night;
- track covertly;
- maintain continuity of observations [until agents can intercept]; and
- monitor or follow activities taking place over extended border areas.

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[116] *Ibid.*
[117] *Ibid.*
[118] *Ibid.*
[119] Christopher Bolkcom, Homeland Security: Unmanned Aerial Vehicles and Border Security. June 28, 2004. Washington, D.C., Congressional Research Service, Report number RS21698.
[120] U.S. Department of Homeland Security, "Unmanned Aerial Vehicle Applications to Homeland Security Missions," March 31, 2004.

Although not noted in the report, UAVs also eliminate the safety concerns faced by helicopter pilots on patrol.[121]

The Border Patrol does not own any UAVs but has had to rely upon arrangements with the Department of Defense to obtain them for limited initiatives and testing. For example, in December 2003, the Border Patrol conducted joint UAV demonstrations along the Arizona Border using a UAV owned by Joint Task Force-Six (JTF-6).[122] Nine AMO support staff were also present to observe JTF-6 staff operate the UAV.[123] The UAV operated 10 to 12 hours per day for 14 days. The on-board camera system allowed agents to see 10 miles into Mexico, where they could watch human traffic "loads" stage and develop. The "loads" were followed to the U.S. border, allowed to enter the United States, and then arrested by border agents.

Department of Defense owned UAV in Arizona.

Although Border Patrol's experience with UAV technology has been positive, its dealings with the Department of Defense have been mixed. In the Laredo sector, for example, agents have requested aerial support from JTF-6, but the operations took up to six months to be deployed, and Border Patrol had no say in which aircraft was employed – helicopter, airplane, or UAV.[124] The Border Patrol's use of JTF-6's UAV is also limited by the military's need for UAVs to support military operations in Afghanistan and Iraq.

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[121] *Op. cit.*, CRS Report RS21698.

[122] Joint Task Force-Six, JTF-6, is a multi-branch group of servicemen dedicated to the counternarcotics mission within the Department of Defense (DOD). Specifically, JFT-6 coordinates all DOD support to law enforcement agencies in counternarcotics missions. JTF-6 also provides operational, training, and intelligence support to agencies' efforts to combat terrorism.

[123] This included, one person to pilot the UAV, three to monitor sensors, two for maintenance, two ICE special agents and one Border Patrol agent.

[124] Merv Leavitt, Deputy Border and Transportation Security Portfolio Manager (DHS), "Responses to Questions, Select Committee on Homeland Security," May 13, 2004.

Despite these problems, the Border Patrol has pursued other opportunities to test a variety of UAVs. For example, the Border Patrol requested commercial vendors to fly products that came "off-the-shelf" in September, 2003. The vendors paid the costs associated with flying the UAVs, but the DHS Science and Technology Directorate provided $3.3 million to evaluate the different UAVs flown during the demonstrations.[125]

The demonstrations, and the evaluations resulting from them, will ultimately help the Border Patrol to make an informed decision about needed UAV capabilities. To that end, the Border Patrol requested $10 million in its fiscal year 2005 budget for the development of a UAV to meet their specific requirements. In the meantime, it appears that the Border Patrol has stopped working with JTF-6 to acquire temporary UAV support. The staff was told that this is short-sighted and if it continues, will deny useful assistance for the years it will take for Border Patrol to develop and deploy their own UAVs. Rather, the staff was told that the Border Patrol should pursue a Memorandum of Agreement with the Department of Defense to continue using their UAV assets as often as practicable while also pursuing innovative private sector participation, as it has done with the ABC initiative, to acquire UAV support for the near term.

Air and Marine Operations Division

The Office of Air and Marine Operations (AMO) has a limited border security role. Specifically, AMO uses long-range radar, fixed wing planes, known as P-3s, to monitor the Southern Border when TARS is not operable. These planes are about the size of 737s and carry a large array of radar, camera, and other monitoring equipment. The P-3s provide more general support, however, for AMO's two primary missions: providing air and marine support to ICE investigations, and monitoring U.S. airspace for unauthorized intrusions. The success of these two missions depends on the quality – and quantity – of their technology and air and marine assets.

AMO has more than 1,000 dedicated law enforcement and support personnel who operate a fleet of 83 vessels and 134 aircraft, including 16 P-3 aircraft.[126] Ten P-3s are stationed at the AMO branch in Corpus Christi, Texas, and the remaining P-3s are stationed in Jacksonville, Florida.

The P-3s provide live video and radar feeds to operations centers and computer laptops, which make them valuable to many federal agencies. For example, the live video feed helps Border Patrol agents respond more quickly to illegal crossing activities, and helps national disaster workers determine asset deployment needs. In addition, P-3 aircraft are capable of carrying nuclear sensors for the Department of Energy if a nuclear event occurred. This would help the Department of Energy to determine the precise location of radiation concentrations and advise public health officials accordingly. Since P-3s are still capable of flying a 4,000 mile, 12-hour mission, these aircraft have also been used extensively to support ICE investigations in South and Central America. The aircraft are also used to support one of the AMO primary missions – to monitor U.S. airspace for unauthorized intrusions – by continuously monitoring

[125] *Ibid.*
[126] Air and Marine Operations Division (ICE), "Role in Securing the Homeland: Report to Congress by the Undersecretary for Border and Transportation Security," January, 2004, p. iv.

airspace for most U.S. special events, such as the Olympics, State of the Union addresses, Democratic and Republican political conventions, and to enforce the restricted air zones around the National Capital Region.

While the P-3 is a versatile asset, the aircraft face one primary problem: their age. The AMO P-3 fleet has an average service life of approximately 20 years, but the average age of the fleet is 37 years.[127] This means the fleet requires continuous maintenance, which costs approximately $23.2 million each year.[128] The Administration has not provided adequate funding to cover the high maintenance costs and this has resulted in delayed repairs which keep a P-3 grounded longer than otherwise necessary.

Initial concerns over the age of the aircraft and related maintenance costs were addressed by a cost-comparison chart provided by AMO staff during a staff briefing at the Corpus Christi P-3 branch. The chart indicated that modernization of one P-3 plane (which includes putting on new wings and a new tail, as well as installing new equipment) would cost approximately $15 million, compared to $90-100 million to buy an entirely new plane – not including the wait time for the plane to be built. Staff also received an operational briefing and observed a training tracking flight in Corpus Christi that also identified a need for updated avionics equipment such as electro-optical/infrared sensors, real-time video downlink systems, and radar enhancements.[129]

Finally, while P-3 aircraft provide an important border security function, the other aircraft in the AMO fleet pose similar concerns: most of the fixed-wing and rotary aircraft are Vietnam-era, require significant maintenance costs, and AMO management indicated they have drafted a modernization plan for their fleet, but that plan is still under review within DHS.

Border Patrol Air and Marine Assets

The Border Patrol air and marine assets are assigned to individual sectors to provide mission support although it is not clear that there is a coordinated, planned approach to how these assets are used, or that they are distributed in the most effective manner possible. Combined, the Border Patrol has 116 aircraft; about 70% are helicopters and the rest are fixed-wing planes. On average, Border Patrol aircraft record three apprehensions for every hour they fly.[130]

One of the problems identified during staff site visits is the lack of qualified pilots available to fly or man the aircraft and vessels. For example, the McAllen sector had 10 operational aircraft, but only four pilots – two of whom were in training.[131] The staff was told

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[127] *Ibid.*, p. 7.
[128] Figure provided by ICE in fiscal year 2005 budget briefing to staff.
[129] *Op. cit.*, AMO, "Role in Securing the Homeland," p. 9.
[130] U.S. House, joint hearing of the Subcommittee on Infrastructure and Border Security of the Select Committee on Homeland Security and the Subcommittee on Criminal Justice, Drug Policy, and Human Resources of the Committee on Government Reform, *Counternarcotics at the Department of Homeland Security: How Well Are Anti-Drug Trafficking Operations Being Supported and Coordinated?,* Testimony of Robert Bonner, Commissioner, Customs and Border Protection, July 22, 2004.
[131] Staff briefing by Border Patrol, McAllen Sector, June 9, 2004.

that this disparity may be due to a continued reliance upon ground enforcement, which is reflected in hiring decisions made by sector chiefs.

The pilot shortage problem may soon be addressed. There are current Administration proposals to merge Border Patrol air and marine assets with the AMO Division of ICE and place the new organization under CBP jurisdiction. Air and Marine currently has more qualified pilots than planes, so this merger would improve the chance that these assets are used as efficiently as possible. However, the staff was warned that in merging these entities, care should be taken to preserve the mission support responsibilities of both assets.

Monitoring Technologies at the Ports-Of-Entry Have Been Deployed on an Ad Hoc Basis

In 1995, the federal government reorganized the way inspections at the land ports-of-entry were conducted.[132] The new approach used a "layered inspection" process, incorporating multiple, overlapping examination methods. Today, CBP continues to rely on non-intrusive inspection technologies to detect weapons of mass destruction (WMD) or terrorists entering through ports-of-entry. These technologies include radiation portal monitors (RPMs), personal radiation detector devices (PRDs), handheld isotope identifiers, and Vehicle and Cargo Inspection System (VACIS) machines. However, the Administration has consistently failed to provide CBP with sufficient funding to deploy many of these technologies. Without them, a comprehensive technological barrier to prevent terrorists from exploiting our borders does not exist.

Radiation Portal Monitors

Despite the significant threat posed by a nuclear or radiological weapon smuggled into the United States, the Department has yet to install any RPMs on the Southern Border.[133] The RPM is a large device that scans a vehicle or cargo as the vehicle moves slowly through the monitor, and can be integrated into normal operations at border crossings. This allows the ports to maintain the flow of commerce.

The Department has a six-phase plan to deploy RPMs at all major ports-of-entry, including the Southern Border. The first three phases have begun, but are not complete. Phase four addresses the Southern Border, but only site surveys have been completed. The remaining tasks include purchasing and installing the monitors. These are not planned to be fully installed and operational until December, 2005 at the earliest. This leaves the Southern Border ports-of-entry without effective means to detect radioactive material.

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[132] Office of National Drug Control Policy, *Future Enforcement Strategy and Capability*, Report to Congress, 1997. Found at http://www.whitehousedrugpolicy.gov/publications/enforce/rpttocong/truckfut.html.

[133] The U.S. Intelligence Community assesses that our country is more likely to be attacked with a weapon of mass destruction delivered by a ship, truck, or airplane than by a ballistic missile. See, U.S. Central Intelligence Agency, *Foreign Missile Developments and the Ballistic Missile Threat Through 2015*, National Intelligence Estimate December 2001. Found at http://www.cia.gov/nic/special_missilethreat2001.html.

The Administration has requested only $50 million in fiscal year 2005 for RPM installation. This funding is inadequate since it only provides about half the monitors needed to complete installation on the Southern Border.[134] Thus, by the fourth anniversary of the September 11 attacks, the Southern Border still will not have a comprehensive detection system installed to screen cargo for weapons of mass destruction.

Personal Radiation Detection Devices (PRD)

CBP has issued over 9,400 PRDs to Border Patrol agents and CBP inspectors, at a cost of approximately $1,200 each.[135] Personal Radiation Detection Devices are small, pager-like devices worn by individual inspectors to detect radiation. Officials at the Department of Energy have stated that PRDs are primarily safety devices – not search instruments designed to detect weapons with usable nuclear material such as enriched uranium.[136] The reason the pagers only work as safety devices is because they have to be in close proximity to a nuclear or radiological source to detect it. Despite this, CBP Commissioner Bonner continues to declare PRDs "an important tool to detect radioactive materials moving through a port."[137]

During staff visits, several CBP inspectors reported that the PRDs give off a high number of "false positives," initially indicating that a radiological source is present, when subsequent tests proved that not to be the case. Some inspectors expressed concern that the high number of false positives is "desensitizing" agents and inspectors, so that when there *is* a real nuclear or radiological source present, agents will ignore the pager's signal, and allow the device to pass into the United States.

Another non-intrusive detection technology used by CBP, often in conjunction with the PRDs, is the radiation isotope identifier device, or RIID. A RIID is about the size of a large power strip and must be held by an inspector close to the source to identify a specific type of radiological or nuclear material found, such as plutonium. RIIDS are used at the Southern Border only as a secondary inspection device. This means that another detection device, such as a RPM must provide the initial indication that a radiological or nuclear source is present before a RIID is used. The unreliability of initial indicators like PRDs, coupled with the limited use of identifier devices, does not provide the accuracy needed to ensure dangerous materials are prevented from crossing our borders.

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[134] U.S. Department of Homeland Security, Budget briefing to staff, February, 2004.
[135] U.S. Department of Homeland Security, Customs and Border Protection, "Commissioner Bonner Unveils High-Tech Equipment to Detect Radiological Weapons," *CBP News Highlights*, March 22, 2004. Available at: http://www.customs.gov/xp/cgov/newsroom/highlights/032404rad_equip.xml.
[136] U.S. House, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, *Customs Service: Acquisition and Deployment of Radiation Detection Equipment.* Testimony of Gary L. Jones, U.S. Government Accountability Office, October 17, 2002.
[137] Testimony of Bureau of Commissioner Robert Bonner, Customs and Border Protection, Before the National Commission on Terrorist Attacks Upon the United States, January 26, 2004. Available at: http://www.cbp.gov/xp/cgov/newsroom/commissioner/speeches_statements/jan262004.xml.

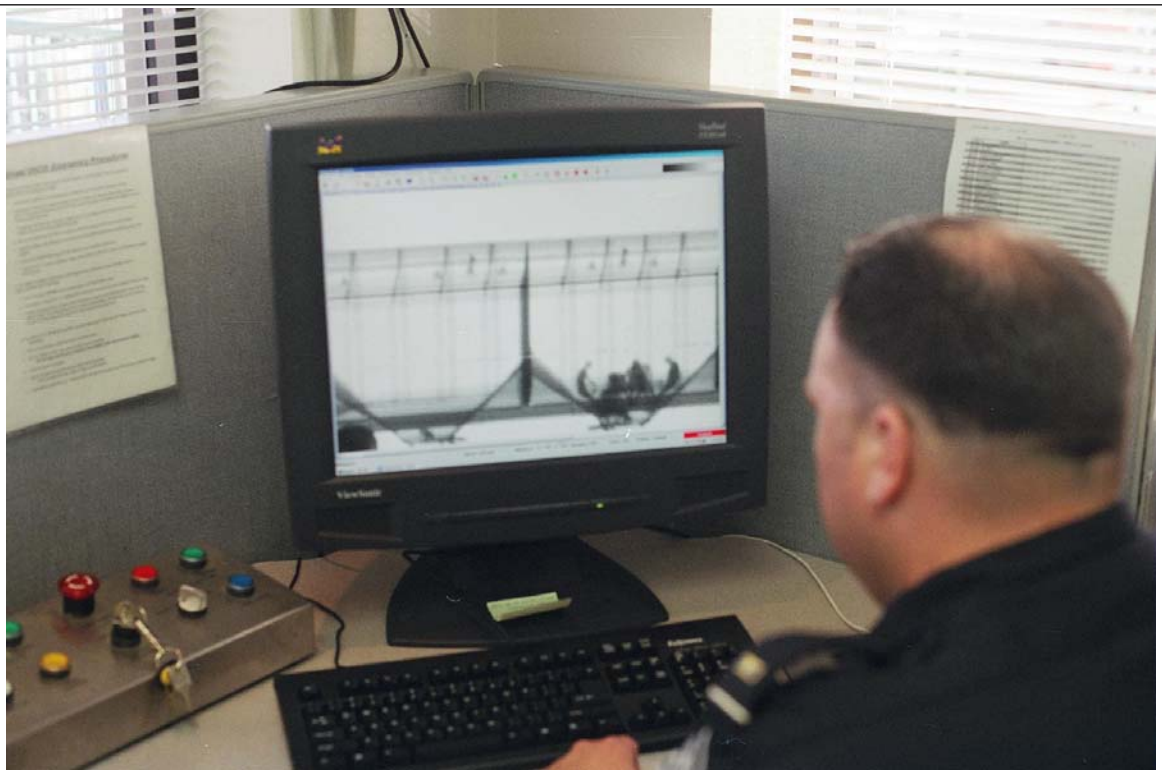
CBP Officer uses a RIID to screen for dangerous materials.

VACIS

Of CBP's 151 VACIS machines deployed nationwide to screen commercial trucks and passenger vehicles for contraband, 71 are deployed along the Southern Border.[138] VACIS machines are one of the most effective cargo inspection tools available today because they provide a detailed x-ray picture of the entire contents of a container in seconds. This allows the inspector to determine if contraband is being smuggled without having to conduct a labor-intensive inspection. There are two types of VACIS machines: mobile and stationary; most of the Southern Border ports-of-entry have at least one type of VACIS machine.

Although VACIS machines are effective inspection devices, they cannot detect a shielded source of nuclear or radiological material. According to a CBP supervisor at Otay Mesa, California port-of-entry, VACIS could be used as a secondary inspection device to provide a "picture" of the truck to determine the specific location of the suspect material. The truck would then go through a second radiation detection device to identify the type of radiological or nuclear material.

[138] CBP, Office of Field Operations, data provided to staff, August 30, 2004.



Rail VACIS in Laredo detects illegal immigrants concealed in a rail car.

K-9 Units

Canine, or "K-9," units are used by the government to detect narcotics, illegal immigrants, unreported currency, bombs, or chemicals that may be smuggled through our ports-of-entry. The cost to train each dog for the K-9 program is approximately $5,000, and they are a very effective detection technology: K-9s are ten times more successful at detecting illicit cargo than human inspectors.[139] In fact, 60% of all drug seizures result from K-9 detections.

Border Patrol Canine Unit trained to detect hidden illegal immigrants outside of Laredo, Texas.

[139] U.S. Customs and Border Protection, "Canine Enforcement Program," found at: http://www.cbp.gov/xp/cgov/enforcement/canines/canine_program/.

Despite their effectiveness, there are only about 500 dogs working for CBP, in either the Border Patrol K-9 program or the CBP K-9 program at the ports-of-entry. This number is insufficient to provide a continuous K-9 presence at the Southern ports-of-entry. K-9s are used at the ports-of-entry to check cars waiting to enter U.S. primary inspection booths. K-9 teams are also used to screen cargo trucks before and immediately after the initial primary checkpoint. The Border Patrol frequently uses their dogs to detect illicit drugs and illegal immigrants at checkpoints established many miles from the border.[140] Each K-9 handler reported that there are gaps in the K-9 coverage because there are not enough dogs, and the dogs they do have are strictly limited as to the number of hours they can work per day.[141]

One concern raised was the possible inefficiencies caused by maintaining separate K-9 training programs. Both the Border Patrol and CBP K-9 programs have the same basic mission in safeguarding America's borders, but CBP maintains separate programs due to differing work environments that include different policies, procedures, and operational needs. This programmatic split means that there are duplicative training sites, with separate sets of facilities, staff, and programs. For example, K-9s working with CBP Officers at the ports-of-entry are trained at a facility in Front Royal, Virginia, while the Border Patrol trains its dogs in El Paso, Texas. Additionally, the two programs obtain their dogs from significantly different sources: CBP tests and adopts dogs from the local animal shelters, while the Border Patrol chooses dogs with specific genetic characteristics that they have determined make the dogs uniquely qualified to work in the Border Patrol environment.[142] While a few substantive training differences may exist, CBP should immediately examine whether the programs can be combined at one site to enhance efficiencies, and save money.

Other Types of Non-intrusive Inspection Technologies

Border inspectors have used a variety of technological devices to screen for illegal immigrants, narcotics, and other illegal contraband as part of the layered approach to border security, but that technology has been deployed unevenly and sporadically. Hand-operated devices such as laser range finders (used to determine truck length to detect false walls and compartments), density detectors (to identify false compartments), and fiber optic scopes to look into gas tanks, can be effectively used in the secondary inspections process, but the equipment varies from port-of-entry to port-of-entry.[143] This means secondary inspections vary by port, and could result in weapons or terrorists getting through the ports undetected.

Two types of cargo imaging systems, x-ray and gamma ray, have also been deployed unevenly across the Southern Border. X-ray devices provide a detailed picture of a truck's contents, while gamma-ray imaging systems can identify the chemical makeup of a truck's contents. Both imaging technologies were used prior to 9/11 to detect illegal immigrants hidden in vehicles and large trucks; however, these devices used to detect immigrants or drugs are also likely to detect terrorist weapons, or even smuggled terrorists. For example, large cargo trucks

[140] For example, the Border Patrol has several fixed checkpoints 25 miles north of the U.S.-Mexico border.
[141] Staff interviews at Laredo, El Paso, Brownsville, McAllen, and San Diego ports-of-entry.
[142] Information obtained from written explanation of CBP K-9 policy differences provided to staff June 14, 2004.
[143] *Op. cit.*, Office of National Drug Control Policy, "Future Enforcement Strategy and Capability."

that are "capable of concealing thousands of pounds of narcotics in numerous areas" can also conceal a terrorist weapon, or even terrorist behind a false wall or floor compartment.[144] That is why the Department should continue to use these technologies in combination with other monitoring and detection devices.

Mobile X-Ray scans commercial vehicles at Laredo, Texas.

Radio Communications

There is still a significant problem with adequate radio communication at the ports-of-entry. For example, staff observed that there is still no interoperability between legacy INS and legacy Customs radios. A CBP inspector stated that 3-4 radio systems are currently being used at the San Diego ports-of-entry and that none of the systems can communicate with the other systems. While staff was visiting the San Ysidro port-of-entry in San Diego, California, they observed a situation in which an individual was trying to run thorough the port. Several legacy INS inspectors were not even aware of the situation, even though they were the closest responders, because they were on a separate radio system. Senior CBP management at the port stated they have received $7 million to fund interoperable radios for the port, and that the system could be installed and functioning as early as autumn, 2004.

In addition, many of the inspectors in the primary booths do not have working radios. For example, in El Paso, Texas, only about half the inspectors have radios, which often makes it impossible to call for back-up. The Tucson Port Director reported that he did not have the budget to purchase encrypted radios, which cost approximately $2,500 each, for every inspector. However, he recognized that access to a radio is an officer safety issue. Therefore, he purchased each inspector an off-the-shelf "Motorola TalkAbout Two Way Radio," which cost approximately $40 each. Generally, these radios use open public frequencies and have a limited

[144] *Ibid.*

range of two miles which can be overheard by others outside the port. The Tucson port director, for this reason, cautioned his inspectors that the radios should only be used for immediate safety needs.

A layered approach to border security necessarily involves a variety of monitoring and detection technologies. Yet DHS has failed to consistently and evenly deploy technology along our Southern Border and at the ports-of-entry. In fact, hundreds of miles of our border go unmonitored by personnel or technology every day, despite the fact that technology currently exists to close this gap to terrorists and illicit cargo. There is no comprehensive plan to implement new technologies along the border to assist the border agencies in their important tasks of defending our borders and promoting commerce.

To remedy this deficiency, we recommend that:

1. DHS should immediately develop a detailed technology deployment plan to ensure every mile of the border is monitored 24 hours a day, seven days a week. Once a plan is developed, the Administration should commit sufficient funding to allow CBP to deploy the necessary devices at all the ports-of-entry. This plan should include, but is not limited to:

- Assessing the success of existing technologies to determine if one technology is better than another or whether there is a way to combine the capabilities of various detection devices into one;

- Requiring the Border Patrol to work with the Science and Technology Directorate to analyze high-altitude monitoring technologies [UAVs, Tethered Aerostat Radar System (TARS)] for use with land-based monitoring technologies;

- Accelerating deployment of radiation portal monitors to all ports-of-entry;

- Expanding the number of K-9 units by 20% the number of K-9 units assigned to Southern Border ports-of-entry, and outline a plan to add more bomb-detection dogs as part of the layered approach to border security.

2. The Administration must also commit sufficient funding to CBP to fully deploy the detection technologies identified by the comprehensive plan so that we can ensure no terrorist weapon enters the United States. As a down-payment toward that goal, DHS needs immediately commit at least $49 million to fully deploy portal monitors at the Southern Border and an additional $200 million to deploy additional remote video surveillance systems between the Southern Border ports-of-entry by the end of this year.